Pollution Prevention Progress Report

U.S. Department of Energy ■ September 1999

Albuquerque Operations Office

Kansas City Plant

Cutting fluid waste (a lubricant used in the cutting of metal) that was previously treated onsite was sent offsite for treatment as a nonhazardous waste. Previously, this wastestream was co-mingled with other industrial waste, and was treated at the site's Industrial Wastewater Pretreatment Facility. The resulting sludge was considered hazardous waste due to the Resource Conservation and Recovery Act's "Mixture/ Contained-In" rule. This segregation activity reduced routine operations hazardous waste by approximately two metric tons, for an undetermined cost savings/avoidance.

Los Alamos National Laboratory

Waste was characterized through the use of improved Nondestructive Assay (NDA) instrumentation, which enables the measurement and characterization of waste as either transuranic or low-level radioactive. This improved technology allows for more accurate measurements, and reduces the quantity of waste that has conservatively been classified as transuranic in the past. This segregation activity reduced cleanup/stabilization transuranic waste by approximately three cubic meters, for a reported cost savings/avoidance of $166,500.

Chicago Operations Office

Argonne National Laboratory–East

Rare earth metals were shipped to DOE's Ames Laboratory-Iowa State University for reuse after being advertised as surplus chemicals on the Chemical Bulletin Board. This recycle/reuse activity reduced routine operations hazardous waste by approximately one metric ton, for a reported cost savings/avoidance of $42,000.

Argonne National Laboratory–West

Staff at the Hot Fuel Examination Facility (HFEF) were able to find another user for excess nitric acid instead of disposing of it. This recycle/reuse activity reduced routine operations hazardous waste by less than one metric ton, for a reported cost savings/ avoidance of $1,000.

Brookhaven National Laboratory

Approximately 1,800 gallons of paint (consisting of old stock, unwanted colors, etc.) was offered to nonprofit organizations in surrounding communities for reuse. This recycle/reuse activity reduced routine operations hazardous waste by approximately 13 metric tons, for a reported cost savings/avoidance of $12,000.

Idaho Operations Office

Idaho National Engineering and Environmental Laboratory

Excess warehouse materials (including tools, building materials, computers, monitors, printers, and communication, industrial, and automotive equipment) were shipped to other DOE facilities, energy-related university laboratories, state offices, other federal agencies, and school districts. This recycle/reuse activity reduced routine operations sanitary waste by 262 metric tons, for a reported cost savings/ avoidance of $444,671.

Nevada Operations Office

Nevada Test Site

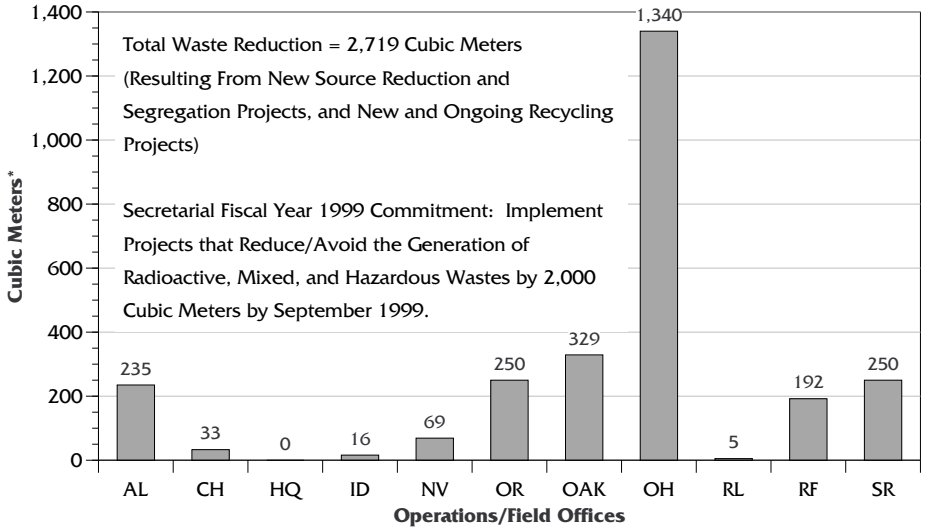
As a result of a Pollution Prevention Opportunity Assessment (PPOA)

PP Quarterly Facts

Apr. '99 – Jun. '99

- *103 radioactive, mixed, and hazardous waste pollution prevention projects completed.*
- *2,719 cubic meters of radioactive, mixed, and hazardous waste reduced.*
- *$6.3 million reported cost savings/avoidance.*

Radioactive, Mixed, and Hazardous Waste Reductions for All Operations Offices (Routine Operations and Cleanup/Stabilization), April 1999 – June 1999



*Assuming one cubic meter is equivalent to one metric ton.

recommendation, the printed circuit board laboratory at an offsite location was decommissioned, eliminating the generation of approximately 55 gallons of caustic solution annually. This source reduction activity reduced cleanup/stabilization hazardous waste by less than one metric ton, for a reported cost savings/avoidance of $2,750.

Oakland Operations Office

Energy Technology Engineering Center

Scrap metal from the demolition of the Fuel Oil Tank System was recycled. This recycle/reuse activity reduced cleanup/stabilization hazardous waste by approximately 163 metric tons, for a reported cost savings/avoidance of $140,000.

Concrete blocks were decontaminated for free-release and reuse. This segregation activity reduced cleanup/stabilization low-level radioactive waste by approximately 105 cubic meters, for a reported cost savings/avoidance of $30,000.

Oak Ridge Operations Office

East Tennessee Technology Park

The contents of a vault located in the K-25 Building were sorted and characterized. This segregation activity reduced cleanup/stabilization low-level radioactive waste by 103 cubic meters, for a reported cost savings/avoidance of $115,855.

Oak Ridge National Laboratory

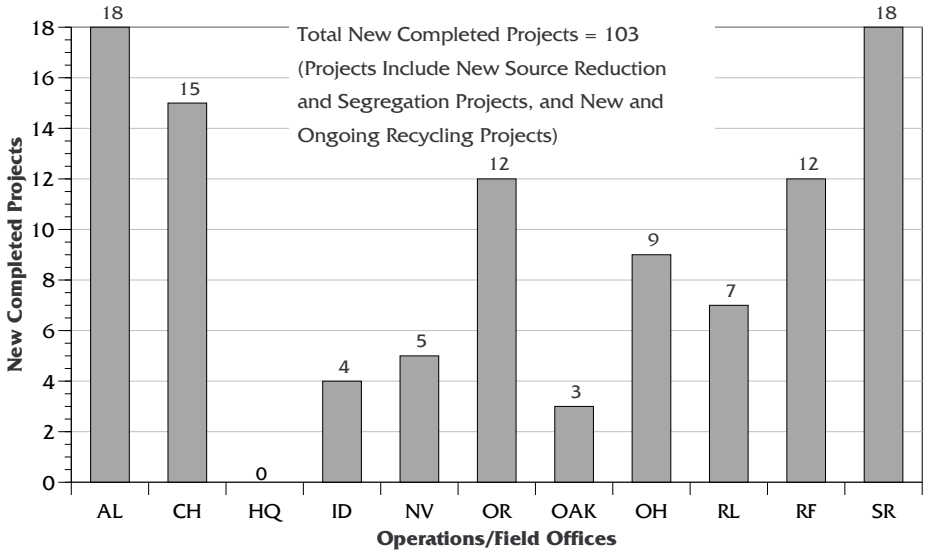
Molten Salt Reactor Experiment Steam Domes were shipped to an offsite vendor for melting and reprocessing into shielding block. This recycle/reuse activity reduced cleanup/stabilization low-level radioactive waste by five cubic meters, for a reported cost savings/avoidance of $32,262.

The Re-Entry Cleaning System for circuit boards replaced systems using freon and aerosols, resulting in reduced air emissions, solvent purchases, and labor costs. This source reduction activity reduced routine operations hazardous waste by less than one metric ton, for a reported cost savings/avoidance of $31,498.

Oak Ridge Y-12 Plant

The Paint Shop purchased a sandblasting/vacuum media/waste recovery unit from the East Tennessee Technology Park that was no longer needed. The unit

New Completed Projects for Radioactive, Mixed, and Hazardous Wastes for All Operations Offices (Routine Operations and Cleanup/Stabilization), April 1999 – June 1999



allows for collection and sorting of removed surfaces, and has reduced the wastestream by 90 percent, since the sandblast grit is reused in the unit. This source reduction activity reduced routine operations sanitary waste by approximately 57 cubic meters, for a reported cost savings/avoidance of $154,000.

Ohio Field Office

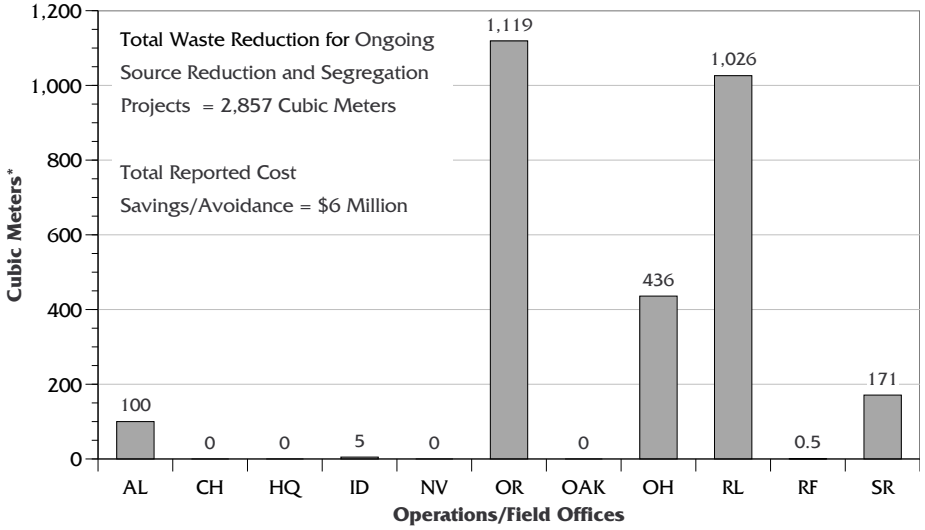
Battelle Columbus Laboratories

Waste generated from the removal of contaminated drain lines was segregated and characterized. This segregation activity reduced cleanup/stabilization mixed low-level waste by approximately one cubic meter, for a reported cost savings/avoidance of $47,372.

Fernald Environmental Management Project

Copper destined for disposal was sent to Oak Ridge for reuse through the National Center of Excellence for Metals Recycling. This recycle/reuse activity reduced cleanup/stabilization low-level radioactive waste by 1,286 cubic meters, for a reported cost savings/avoidance of $1,500,000.

Radioactive, Mixed, and Hazardous Waste Reductions for Ongoing Source Reduction and Segregation Projects for All Operations Offices (Routine Operations and Cleanup/Stabilization), April 1999 – June 1999



*Assuming one cubic meter is equivalent to one metric ton.

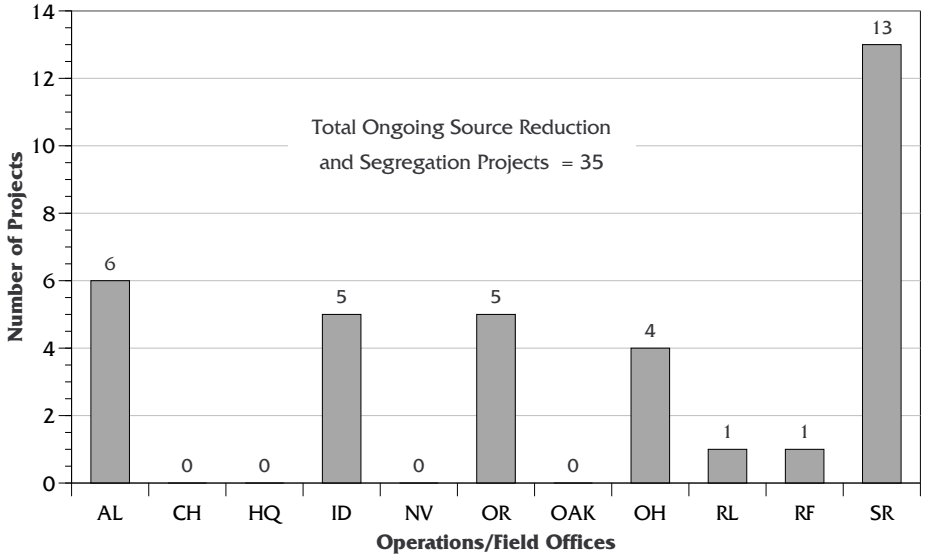
Mound Plant

Six hundred excess gas cylinders were collected and sold for reuse. This recycle/reuse activity reduced cleanup/stabilization sanitary waste by 21 metric tons, for a reported cost savings/avoidance of $100,000.

West Valley Demonstration Project

Scrap copper wire was collected and sold to a vendor for recycling. This recycle/reuse activity reduced routine operations sanitary waste by approximately 10 metric tons, for a reported cost savings/avoidance of $7,034.

Ongoing Source Reduction and Segregation Projects for Radioactive, Mixed, and Hazardous Wastes for All Operations Offices (Routine Operations and Cleanup/Stabilization), April 1999 – June 1999



Richland Operations Office

Hanford Site

Waste from personal protective equipment and maintenance activities was reduced, and a radiological control area was surveyed, cleaned, and downposted to a radiological buffer area. This source reduction activity reduced routine operations low-level radioactive waste by less than one cubic meter, for a reported cost savings/avoidance of $200.

Pollution Prevention Recognition

*Through the efforts of the Property Management Redistribution and Sales Group, the **Nevada Test Site** was able to donate unneeded miscellaneous equipment for recycling and reuse. Approximately $250,000 worth of equipment was donated through the School Gift Program and the Energy-Related Laboratory Equipment Grant.*

*The Energy Management Group at the **Idaho National Engineering and Environmental Laboratory** saved more than $1 million in Calendar Year 1998 through reduced energy consumption due to the installation and use of new energy efficient equipment. Increased savings are projected for Calendar Year 1999. In addition, a High Return-on-Investment program was implemented to increase employee awareness of energy conservation; the $65,000 investment was recovered in less than seven months.*

*At the **Oak Ridge Reservation**, as excess materials and equipment are identified, they are entered into a data base known as the "Swap Shop." Personnel can then browse the data base, select needed materials or equipment, and arrange for pickup or delivery of available items, reducing the purchase of new items.*

Pacific Northwest National Laboratory

The schedule for changing crane oil was revised from an annual basis to an hourly use basis, which will enable fewer oil changes (once every 10 years instead of annually). This source reduction activity reduced routine operations hazardous waste by less than one metric ton, for a reported cost savings/avoidance of $11,613.

Rocky Flats Field Office

Rocky Flats Environmental Technology Site

Approximately 2,300 Halon #1211-containing fire extinguishers and 2,600 pounds of Halon #1301 from fire protection systems were sent to an EPA-approved processing facility that is able to recover 100 percent of the Halon. The recovered Halon will be reused by the Department of Defense. This recycle/reuse activity reduced cleanup/stabilization sanitary waste by approximately two metric tons, for a reported cost savings/avoidance of $109,000 (cost savings include avoided purchase costs and a rebate from the processing facility).

Insulation and roofing materials were segregated, reducing the volume of low-level radioactive waste requiring disposal. During the deactivation and decommissioning of Building 788, fiberglass batting was separated from its backing, enabling free-release of the fiberglass as industrial sanitary waste. Plywood in the ceiling of the building was separated from the poly roofing material it was attached to, enabling free-release of the plywood as industrial sanitary waste. This segregation activity reduced cleanup/stabilization low-level radioactive waste by 61 cubic meters, for a reported cost savings/avoidance of $10,000.

Savannah River Operations Office

Savannah River Site

The Decontamination Facility uses lead sheets and bricks for shielding in decontamination projects and during decontamination of the lead for reuse in other projects. An Instacote System is applied, which coats the lead sheets and bricks and encapsulates the lead, which prevents worker lead exposure, lowers personal protective equipment requirements, and reduces the generation of mixed waste. This source reduction activity reduced cleanup/stabilization mixed low-level waste by approximately three cubic meters, for a reported cost savings/avoidance of $108,924.

The Spent Fuel Storage Division's Receiving Basin for Offsite Fuel Facility implemented a project to replace sandbag barriers with asphalt curbs. This source reduction activity reduced routine operations low-level radioactive waste by approximately nine cubic meters, for a reported cost savings/avoidance of $27,417.

For more information, please contact Christina Houston, Albuquerque National Pollution Prevention Program, at 505-845-5483, or via e-mail at chouston@doeal.gov.

This Report is also available on the EM-77 Web site at http://twilight.saic.com/WasteMin/quarter.htm.

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